

INTERNATIONAL SEARCH REPORT

International Application No

PCT/DE2004/002374

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L23/31 H01L23/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/056561 A1 (YAGUCHI AKIHIRO ET AL) 16 May 2002 (2002-05-16)	1,2,8,9, 14,15
Y	paragraphs '0055! - '0067!; figure 1	3
X	US 6 429 372 B1 (TAGUCHI HIDEO ET AL) 6 August 2002 (2002-08-06) column 9, line 55 - column 13, line 27; figure 2	1,8,9, 11-15
A	US 2002/045294 A1 (BARRETT JOSEPH C ET AL) 18 April 2002 (2002-04-18) the whole document	1-15
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

7 July 2005

Date of mailing of the international search report

25/07/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	-& PATENT ABSTRACTS OF JAPAN vol. 2003, no. 12, 5 December 2003 (2003-12-05) & JP 2003 258158 A (HITACHI LTD; HITACHI ULSI SYSTEMS CO LTD), 12 September 2003 (2003-09-12) abstract -----	1-15
Y	TW 554 501 A (SILICONWARE PRECISION INDUSTRIES CO., LTD) 21 September 2003 (2003-09-21) figure 3D -----	3
P,Y	-& US 2004/032014 A1 (LAI YU-TING ET AL) 19 February 2004 (2004-02-19) the whole document -----	3
Y	US 5 874 784 A (AOKI ET AL) 23 February 1999 (1999-02-23) figures 1,2,7 -----	3

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/DE2004/002374

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 2002056561	A1	16-05-2002	JP	2000269369 A	29-09-2000
			SG	87093 A1	19-03-2002
			TW	451369 B	21-08-2001
			US	6340793 B1	22-01-2002
US 6429372	B1	06-08-2002	JP	11284007 A	15-10-1999
US 2002045294	A1	18-04-2002	US	6310298 B1	30-10-2001
JP 2003258158	A	12-09-2003	NONE		
TW 554501	A	21-09-2003	US	2004032014 A1	19-02-2004
US 2004032014	A1	19-02-2004	TW	554501 B	21-09-2003
US 5874784	A	23-02-1999	JP	3176542 B2	18-06-2001
			JP	9121002 A	06-05-1997